

The relative environmental impacts of cutting granite kerbstones in-situ compared to shipping from China

Summary

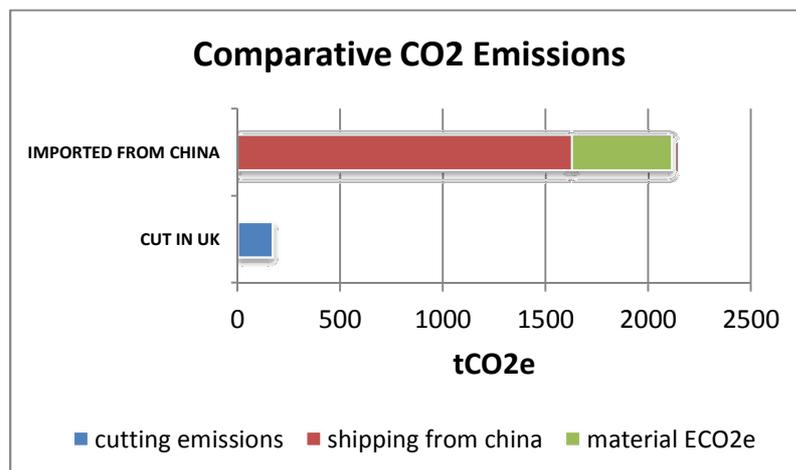
Preliminary analysis suggests that cutting kerbstones in-situ has less than a tenth of the environmental costs of importing the same volume of material from China.

Context and background

The Mayor of London is creating a cycleway in London, requiring 66km of existing granite kerbstones to be replaced or cut to reduce the risk of injuries to cyclists. A kerb-cutting machine capable of shaping the stones offers an alternative to wholesale replacement.

Analysis

We have compared the anticipated carbon emissions from the proposed diesel-powered diamond cutting machine (working at a rate of 12 kerbstones per hour) with the carbon emissions involved in extracting, processing and shipping an equivalent tonnage of pre-cut granite kerbstones from China.



We estimate the emissions associated with cutting the kerbstones in situ will be around 170 t CO₂ in total. The emissions associated with extracting, processing and shipping the same volume of material from China are 2100 t CO₂ (see chart).

The bulk of the emissions associated with importing kerbstones are in shipping

rather than the extraction and processing.

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